

CENTRAL INTELLIGENCE AGENCY
Geography Division, ORR
Project Initiation Memorandum

TO : Chief, Geographic Research

FROM: Chief, Geography Division

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Project No. 64.1320

Date: 24 May 1955
(Revised)

1. Subject of Proposed Project: The Soviet Arctic.
2. Statement of Problem:
Recognizing the possible developing Soviet threat to North America via the arctic, the purpose of this study is to examine and analyze the various activities, developments, and physical conditions existing in the Soviet Arctic that would reflect its potential and thereby aid in determining Soviet intentions in this region.

Outline is attached.

3. Requester: Self-initiated.

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4. Responsible Analysts:

5. Kind and Extent of Cooperation Desired from:

- (a) Other divisions of the Geographic Area:
D/GL for basic maps. D/GP for interpretation of available photography.
D/GC for blowups and orientation and large-scale maps to accompany final report.
- (b) Other parts of CIA: Coordination with D/S.
Graphics Register for photography. Perusal of files of Industrial Register.
- (c) Outside CIA:
Examine files of ESID/AMS.

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6. Estimated Man Hours: 1500
7. Probable Completion Date: 30 July 1955
8. Probable Form of Final Publication: CIA/RR-G. 15

9. Comments: As far as is known to the Geography Division, a good comprehensive study based on materials available in the government has not been made, although several parts of the Agency have expressed interest.

Approved:

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THE SOVIET ARCTIC

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I. INTRODUCTION

A. Definition

1. Traditional boundaries of the Soviet Arctic

- a. Tree line
- b. Arctic Circle
- c. 50°F July isotherm
- d. 32°F annual isotherm

2. Functional boundaries

B. Strategic Significance of Location - proximity to the North American continent

1. Great Circle Polar Air Routes

2. East-west Soviet communication routes in the Arctic as a northern counterpart to Trans-Sib

- a. Northern Sea Route - a strategic supply line
- b. Recent Railroad developments - a possible east-west link-up, and their importance in the year-round logistic support of Soviet installations.

C. Soviet Development

1. Economic

- a. Exploitation of resources
- b. Improvement of transport

2. Scientific investigations and their contributions to Soviet capabilities in the Arctic

- a. Meteorological
- b. Hydrographic
- c. Geodetic

II. POPULATION - MAINLAND AND ISLANDS

A. Density and Distribution

B. Composition and Activities

1. Soviet Personnel - their role in the military, scientific and political developments

2. Slave Laborers -- importance to the development of the north

3. Indigenes - their contribution to the northern economy

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III. SETTLEMENTS AND INSTALLATIONS

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A. Distribution

B. Function and Orientation

1. The function of Arctic settlements as ports, mining centers, and supply bases for military and economic operations
2. The orientation of coastal settlements to the Northern Sea Route and Leningrad or to inland centers connected by rail
3. Island settlements oriented to Arctic mainland settlements or directly to European centers

C. Character of Settlements

IV. ECONOMIC DEVELOPMENT

A. Role of Arctic Areas in the Soviet Economic Regional Structure

B. Natural Resources. Local sources of industrial raw materials and food and raw materials for export.

1. Reserves and mining of mineral resources
2. Animal life and its exploitation
3. Economic significance of vegetation

C. Activities - hunting, herding, fishing, and agriculture

D. The Effect of Collectivization on the Economy of the Area

E. Potential for Further Economic Development as a Result of Increased Strategic Value

V. TRANSPORTATION PATTERN (Strategic Significance)

A. Regional Aspects

1. Water transportation

- a. Northern Sea Route
- b. Inland Waterways

2. Land transportation

- a. The expansion of east-west railroad lines (new Salekhard-Igarka line)
- b. Roads and trails (reindeer migration routes influence on development of transport arteries)

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3. Air transportation

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- a. Major air routes - relative importance
- b. Facilities - airfields and seaplane stations
- c. Type of traffic and amount
- d. Function
 - (1) Linking isolated settlements, movement of personnel
 - (2) Scientific - ice reconnaissance, supply of floating stations, etc.
 - (3) Military - transpolar

VI. EFFECTS OF THE PHYSICAL ENVIRONMENT ON THE SCALE OF OPERATIONS

A. Climate - a major environmental influence

- 1. Temperature - a limitation to human activity and machine operation
 - a. Controls
 - b. Variations
 - c. Extremes
 - d. Anomalies
- 2. Precipitation - scant precipitation as a distinctive feature of Arctic climate
 - a. Types
 - b. Controls
 - c. Quantity
 - d. Seasonal and areal distribution
 - e. Duration and depth of snow cover
- 3. Winds - their influence on outdoor activities
 - a. Origin
 - b. Direction-seasonality
 - c. Velocity
 - d. Windchill
- 4. Fog restrictions to transportation
 - a. Types
 - b. Seasons
 - c. Distribution
- 5. Light conditions - seasonal characteristics
 - a. Length of day and night
 - b. Seasonal change
- 6. Aurora Borealis - effects on telecommunications
- 7. Warming climatic cycle and its influence on future Arctic development

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B. Terrain - effects on movement and the establishment of installations

1. Surface configuration

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- a. Coastline
- b. Plains - lowlands, marshes
- c. Highlands
- d. Mountains

2. Permafrost - construction and maintenance problems

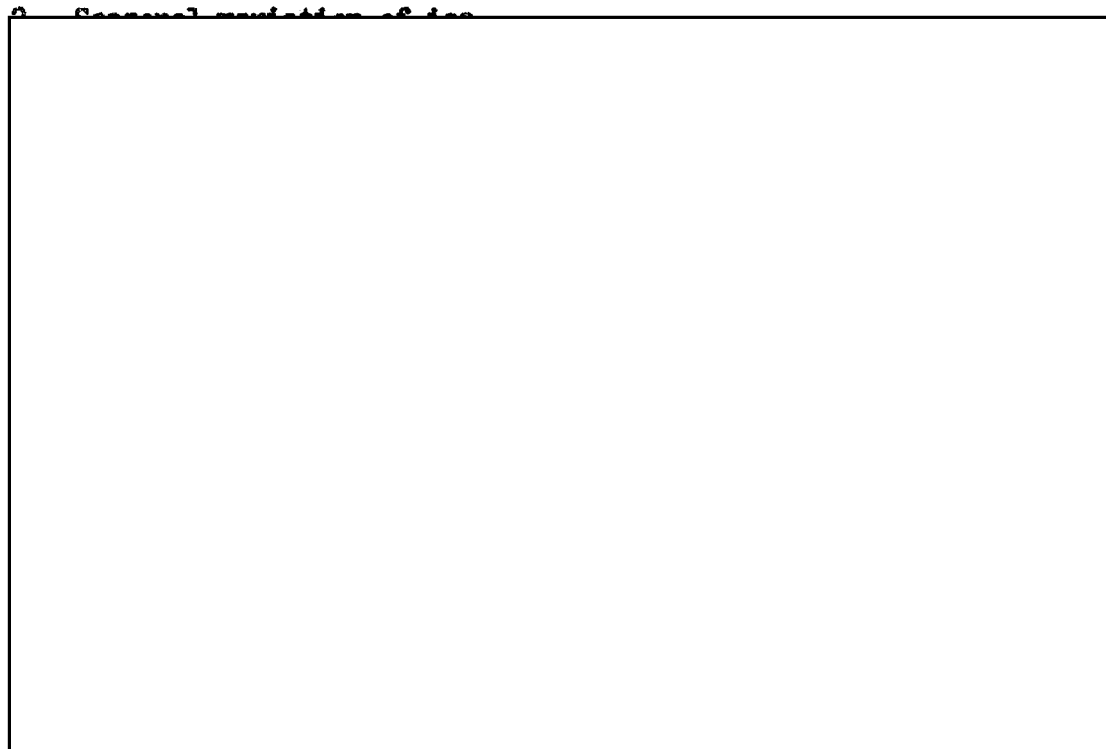
- a. Origin
- b. Extent
- c. Properties

C. Hydrography

- 1. Seas
- 2. Rivers
- 3. Lakes

D. Ice and its relationship to navigation

- 1. Controls of ice formation and movement



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